Landscape management based on cultural services: the Basque country case

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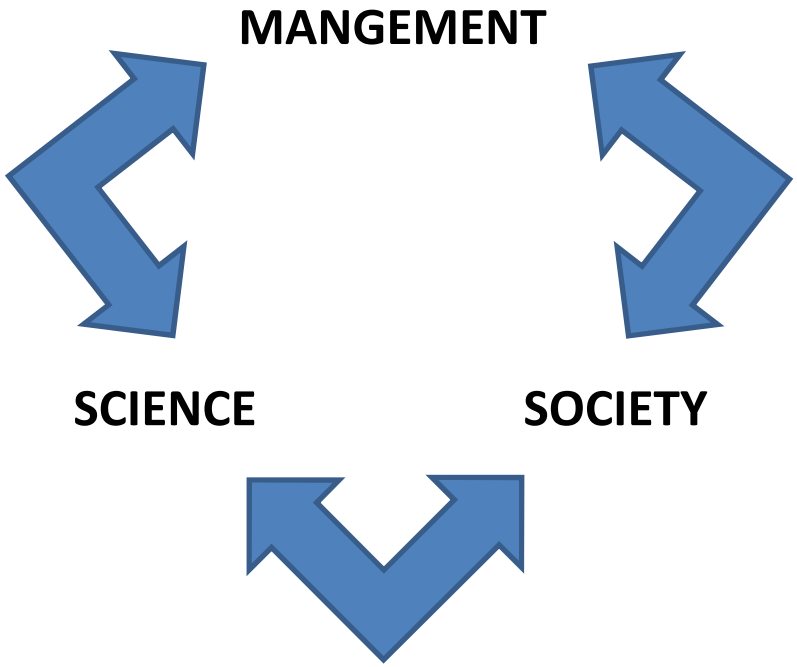
To sustain cultural ecosystem services and cultural heritage it is important to go in depth in the science policy interface

INTEGRATIVE, ADAPTATIVE AND RESILIENT MANAGEMENT

Ecosystem Service Framework provides a space for coordination and dialogue between scientist, managers/politicians and Stakeholders



Efficient governance mechanisms emerge from the cooperation of scientists and practitioners

Ecosystem services

Provisioning

Food, fresh water, wood, fiber, genetic resources

Regulating

Climate regulation, air quality, pollination

Cultural

Educational, recreational, traditional knowledge, local identity

Nature, basis of well-being

Ecosystem Services of the **Basque Country**

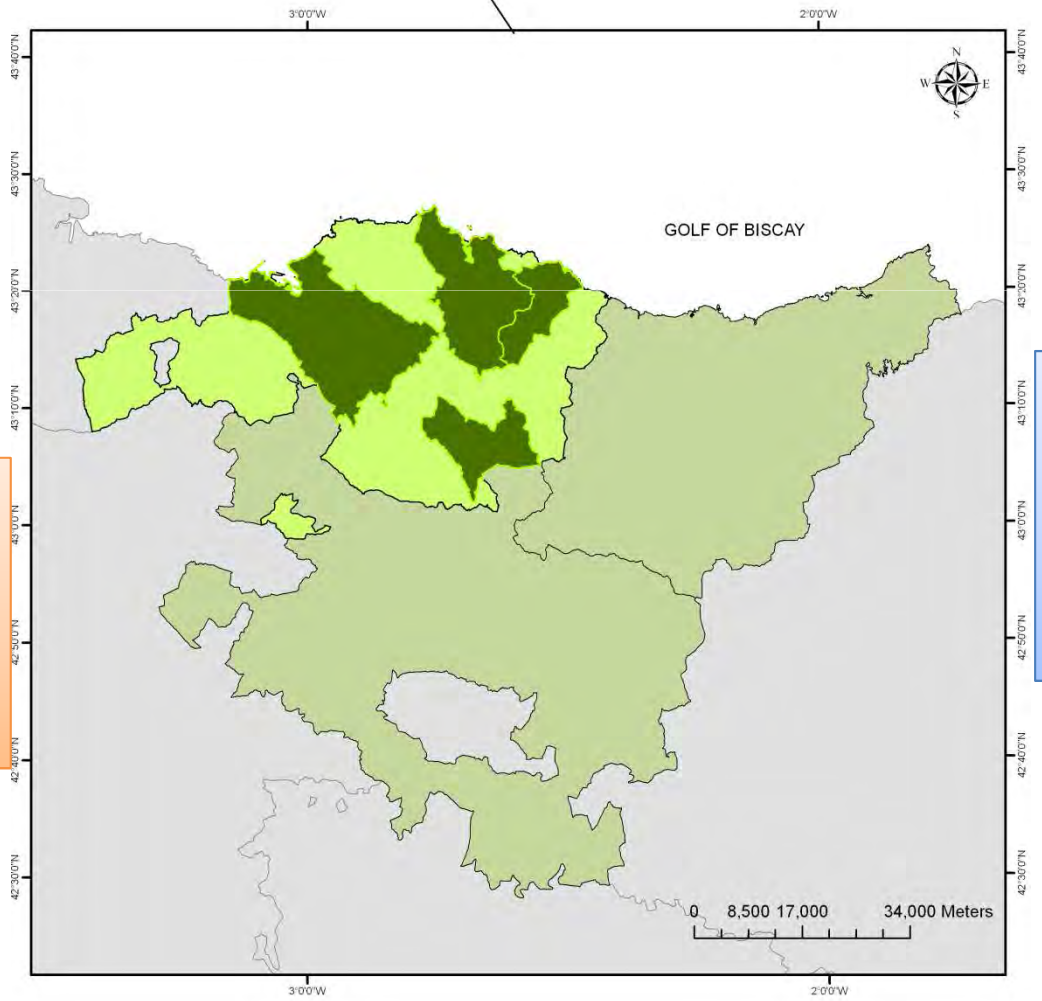
Ecosystem Services Assessment of the Basque Country:

A local/regional integrative approach to enhance the link between science, policy-making and society.

Study area

Different working scales

Basque Country
7.229 km²
2.18 M inhabitants
(302 inhab/km²)
BM 2.189 inhab/km²

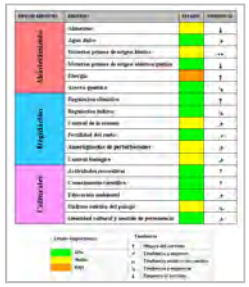


Bizkaia
2.216 Km2
1.151.113 Inhab.
(520 Inhab/km2)
111 towns

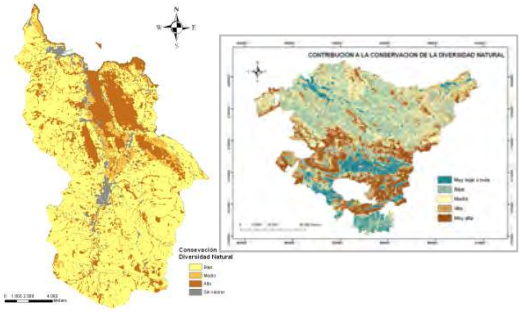
Urdaibai
252 Km² (11,38%)
44.557 Inhab
(177 Inhab/Km²)
17 towns

Natural heritage and Ecosystem Services methodologies:

Main research lines:



1. Ecosystem services evaluation using indicators



2. Mapping ecosystem services at different scales

3. Analyzing social preferences (demand) and users' perceptions: participatory processes

4. Scenarios development:

Qualitative (participatory) + Quantitative (modelling)

Implementation of ES in landscape management

Key elements of the assessment organization structure and working approach

- An active transdisciplinar core team that works actively as a community of practice
- A clear coordination strategy + a flexible and fluent working mechanism
- Specific transdisciplinar working groups to go in depth with concrete applicability measures
- A strong, continuous and transversal outreach and educational strategy
- The involvement of stakeholders at multiple stage of the assessment
- Internazionalization strategy

Assessment Results:

Scientific production:

Scientific production	Results obtained
ISI publications	12 published articles, 2 articles in press, 232 times cited in Web of Knowledge
Organization/Host of international conferences and relevant meetings	2 international events organized (SGA Network meeting in 2011; Sustainability Pathways International Conference in 2011)
Contribution to international conferences and relevant meetings	2 Keynote speakers, 5 invited speakers, 13 oral presentations, 21 poster presentations, 1 stand
Participation in international networks	ESP, SGA, UNESCO, ENCORE (Regions of Europe), ENCA/EPA interest group on ecosystem services (IG ES), IPBES
Collaborations and inter-exchange programs	University of Nottingham (Roy Haines-Young and Marion Potschin), University of Amsterdam (Peter Verburg), INTA and National University of la Pampa, Argentina (Ernesto Viglizzo), Autonomous University of Madrid (Carlos Montes)

Scientific production of the Basque Assessment always contains insight and recommendations for sustainable landscape management

All assessment results, reports and relevant materials are publicly available on www.ehu.eus/cdsea.

Examples

1. A holistic approach including biological and geological criteria criteria for integrative management

We propose the inclusion of geosites into planning instruments of protected areas and facilitate tools and methodologies to do so

(Peña et al., in press. *Environmental management*)

2. Cultural Ecosystem Services

Spatial mismatch between recreation ES supply and demand
-> Agroecosystems high demand and low recreation potential

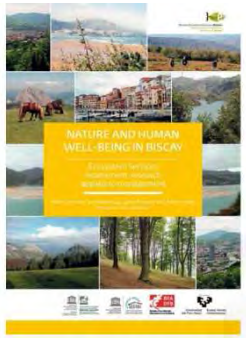
(Peña et al. 2015. *Ecosystem Services* 13:108-118; Casado-Arzuaga *et al.,* 2014. *Landscape Ecology*).

Transversal: international inputs from different scales

- Data credibility (Peer review)
- Make it more relevant for local / regional policy-makers
- Engagement with the wider community and scaling of results

Outreach strategy and educational programs:

Outreach strategy and educational programs	Results obtained
Organization of seminars, conferences, participatory workshops and training courses	3 conferences, 4 seminars and 3 participatory workshops were organized with successful assistance of a wide variety of local stakeholders. These public events counted on the inputs of international experts on ES. 3 educational courses and workshops specifically directed to school teachers, scholar agenda 21 promoters and environmental Two specific training courses and three specific workshops were held with experts of different administration bodies (technicians) and One on-line course directed to civil society
Postgraduate university studies	The Postgraduate Degree in Environment and Sustainability of the University of the Basque Country (60 ETCS) includes since 2009 a subject on Ecosystem Services, where the Basque Assessment results are presented. Besides, the researchers of the Basque team participate in other two postgraduate degrees where ES concept and some results of the assessment are presented.
Outreach publications and materials	2 different brochures in 4 languages 2 specific educational materials A book on ecosystem services and human well-being with the Basque case study A book (in three languages) that reports the assessment results in a friendly, entertaining and educational way. 5 book chapters 10 papers in educational journals with scientific content
Audio-visual media	10 radio-interviews, 9 promotional videos; with over 2500 views
News release	23 news release were well reported in mainstream press in different moments, 9 of them related to the public events organized and the others with specific results of the assessment
Social networks	The facebook of the project has over 270 followers (persons and entities) of more than 28 different countries



Policy implementations achievements

Urdaibai
Biosfera Erreserba
Reserva de la Biosfera

A.The Urdaibai Biosphere Reserve Master Plan for Use and Management

B.The Bilbao Metropolitan Landscape Planning

C.The Biscay 21 sustainability strategy

D.The Regional Planning Guidelines for the Basque Country

Indirect implementations

A. Life projects evaluation (e.g. LIFE+ Ordunte Sostenible)

B. Evaluation Impact Assessments (e.g. Umbe corridor)

Near-future implementation steps:

A. Creation of a practical guide to facilitate the actual implementation of ES concept in planning

B. Inclusion of ecosystem service indicators in official statistics

Lessons learned and Insights from the Basque case for effective governance instruments

- **Make use of existing instruments and mechanisms to create synergies**, while facilitating additional tools, instruments and working mechanism.
- **Working collaboratively** between different actors helps in the usefulness of the ES results and favours their acceptance and implementation
- Importance of facilitating spaces for coordination and dialogue + focusing on target groups
- Relevance of maintaining scientific accuracy and international linkages
- the proved utility of this working mechanism makes key agents to continue involved, and to attract more agents into the process
- Availability of useful ES results + educative and collaborative work -> different implementations

Nature, basis of well-being

Ecosystem Services of the **Basque Country**

Thank you very much

Moitas grazas

Eskerrik asko

Integration of science and stakeholders improves decision-making processes

Further information:

www.ehu.es/cdsea

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